

If you have any general questions about your rights as a participant in this study, please contact the University of Illinois Institutional Review Board at 333-2670 (you may call collect) or via email at [irb@uiuc.edu](mailto:irb@uiuc.edu)

## Fuel Efficiency Study Consent Form

Dear Participant,

This study, conducted by Prof. Tarek Abdelzaher's research team at the Department of Computer Science, University of Illinois, explores the use of vehicular sensors and sensors embedded in cell-phones and GPS devices to build services for traffic management and fuel-efficiency enhancement. Participation in this study is completely voluntary. Your decision to participate, decline, or withdraw from participation will have no effect on your grades at, current status, or future relations with the University of Illinois.

In order to participate, you must be 18-64 years of age, be in possession of a vehicle with an on-board diagnostic port (most vehicles manufactured since 1996 have such a port, called the OBD-II port), have a valid driver license, an auto-insurance with at least \$300,000 liability coverage, and a valid e-mail address. If you agree to participate, you will be given a system consisting of an on-board diagnostic scanner (a device that analyzes engine efficiency, also used by mechanics to diagnose the check-engine light), a GPS device (which stands for Global Positioning System, and is capable of determining vehicle location), a phone, and a memory card (or some subset of these) to connect to your vehicle. We shall thereafter refer to these as the *devices*. You will be assisted with installation of these devices and will be able to turn them on and off at will. When turned on, the devices will measure several parameters of engine performance, as well as the location of the vehicle, its speed, and acceleration. These data will be recorded automatically. You will be asked to drive 20-30 miles within the city of Urbana-Champaign per experiment. A route will be suggested. Measurements taken during your drive will include location, time, total fuel consumed, fuel consumption rate, vehicle speed, distance traveled, average speed, average fuel economy, engine idle percent, idle time, drive time, calculated load, engine RPM, and absolute throttle position.

Volunteers will be given monetary compensation in the amount of \$1/mile of *data collected*. The maximum total compensation per individual is \$100. You are responsible for turning on the devices when you wish the data collection to begin. Failure to turn on the devices will prevent data from being collected and hence will reduce or eliminate your compensation.

The duration of this experiment is from \_\_\_\_\_ am/pm on \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_\_ am/pm on \_\_\_\_/\_\_\_\_/\_\_\_\_.  
(The above fields must be filled in prior to signing this form.)

You are responsible for returning all the devices received upon the termination of the experiment. There are expected to be no risks to participation beyond those that exist in everyday life and normal use of a commercial OBD-II scanner and GPS device. The driver should exercise common sense precautions. You should not handle the devices while driving. Turn the devices on or off only when safely parked. For more information on safe handling of commercial OBD-II scanners, GPS devices, and phone, please refer to the webpages of the devices you received.

**Declaration of Consent:** I, \_\_\_\_\_ (the undersigned), have read the above description of the study and sensors, and agree to use these devices for the duration of the study indicated above in my car. I understand the type of data obtained from these devices and information inferred from these data, and agree to their anonymous release for purposes of this study and in publications that result from this study. I understand that all data measured and information inferred will be collected and stored anonymously and that it may be published in its anonymous form. I attest that I received and am responsible for returning the following devices:

- |                    |       |      |              |
|--------------------|-------|------|--------------|
| 1. OBD-II Scanner: | (YES) | (NO) | Description: |
| 2. GPS Device:     | (YES) | (NO) | Description: |
| 3. Phone:          | (YES) | (NO) | Description: |
| 4. SD Card         | (YES) | (NO) | Description: |
| 5. Other:          |       |      |              |

I attest that I will return these devices to the office of \_\_\_\_\_ at \_\_\_\_\_ am/pm on \_\_\_\_/\_\_\_\_/\_\_\_\_.

I understand that the devices I received constitute commercially available products. I have been given Web links to their manuals. I understand that it is my responsibility to drive safely, to abide by all traffic laws, to avoid distractions while operating my vehicle (such as, but not limited to, texting or using a cell-phone while driving), and to exercise best practices and precautions to avoid damage, loss, or injury to myself, my vehicle, and others during the experiment. **I attest that I have auto insurance with at least \$300,000 liability coverage.** If the above changes I will immediately inform the researchers and stop participating in the study. A countersigned copy of this form will be provided to me for my records and to authorize the use of these devices for the duration of the experiment.

Participant Name: \_\_\_\_\_ NetID (if any): \_\_\_\_\_

Participant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Primary Investigator Name: Tarek Abdelzaher

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

UNIVERSITY OF ILLINOIS  
APPROVED CONSENT  
VALID UNTIL

For questions about the study, please contact the primary investigator:  
Tarek Abdelzaher, e-mail: [zaher@cs.uiuc.edu](mailto:zaher@cs.uiuc.edu)

**AUG 30 2010**